AR19

A History of HALLNOR MINES LIMITED

THE PROSPECT

The first record of Noranda Mines' involvement in the Porcupine area of Northern Ontario dates back to December 1922, the year of its incorporation, when it issued shares for some claims in Label & Whitney Townships. Then in February 1923, Noranda sold the Mayer and Bremner veteran claims in Whitney Township to Anglo-Porcupine Gold Mines for shares of that company.

The increase in the price of gold from $20.67 to $35 U.S. per ounce in 1934 turned attention to the mining camps of Northern Ontario. Oliver Hall (1880-1954), who graduated in mining at McGill University in 1902, left the Mond Nickel Co. and joined Noranda as Assistant General Manager in 1931. He became Noranda's Consulting Engineer in Toronto in 1938. He was awarded the Inco medal by the Canadian Institute of Mining and Metallurgy in 1939 and received a Dr. of Science degree from his Alma Mater in 1948.



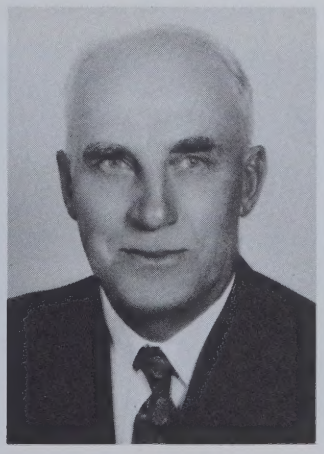
Oliver Hall

Hall engaged Dr. A. M. Bell (1906-) as a field geologist in 1934. Bell believed that the ore making structures at Pamour Porcupine Mines' property in Whitney Township, located some 15 miles east of Timmins, would continue west into the adjoining four Poulet Veteran claims. This ground was owned by the Porcupine Quartet Gold Syndicate in which Viola and George MacMillan had an interest. James Murdoch (1890-1962), the President of Noranda, negotiated with them for these claims and in 1936, incorporated Hallnor Mines, capitalized with 2,000,000 shares at one dollar par value for this purpose. Noranda paid some $54,000 for certain Syndicate units and gave 675,000 Hallnor shares which were distributed among the Syndicate unitholders. In all, 725,000 Hallnor shares (36.25%) were issued for the "Poulet Vet" and Noranda subscribed for 900,000 shares at 50¢ per share with an option on the remaining 375,000 shares at $1 per share. If the project became viable, Noranda undertook to loan Hallnor the necessary funds to bring the property into production and provide working capital. Noranda also took an option on seven adjoining claims to the west for which it incorporated Bonetal Gold Mines. These claims were later acquired by Broulan Reef Mines Ltd.

There were few rock outcrops on the eleven claims, so Bell laid out a diamond drilling program to test his theory. The target was the conglomerate which had been host rock for the Pamour orebodies. The early drilling results were so disappointing that Toronto proposed the work be discontinued after completion of the then current hole. However, Bell saw coarse visible gold in pieces of core from that hole and is reported to have run four miles to Golden City to catch a train for the Toronto Office. The decision to stop work was, of course, reversed and drilling continued to yield more high grade free gold intersections.

MINE DEVELOPMENT

In 1936, any new Canadian mine became free of income tax for its first three years of production. With this incentive, it was decided to sink a small three compartment shaft on the "Poulet Vet" claims to a depth of 600 ft with stations at the 210-350-560 foot levels. A. Lester Sharp (1882-1958), a graduate of McGill University, who had worked for Hall at the Garson mine near Sudbury and had served with British Army Engineers in World War I, was engaged as Manager. He hired J. H. Stovel (1911-), also from



A. L. Sharp

McGill, who assisted in drafting this historical article. Stovel, whose father was the Manager of Dome Mines Ltd., grew up in South Porcupine. He became Mine Superintendent at Hallnor in 1937, served in the Armed Services during the war, became Manager of the neighbouring Pamour mine in 1949. He went to Noranda, Quebec as Assistant Manager in 1951, later moved to Toronto and was General Manager of Noranda from 1961 to 1965 when he became Executive Vice President of Kerr Addison Mines and President in 1967.

The Hallnor shaft was ready in the spring of 1937, and drifting and cross-cutting on the first three levels established the validity of the results obtained in diamond drilling. Due to the extremely high grade and occasional coarse nature of the free gold encountered, it was difficult to establish grades using channel samples. Therefore, muck samples were carefully taken. Some of the 1937 results were as follows:

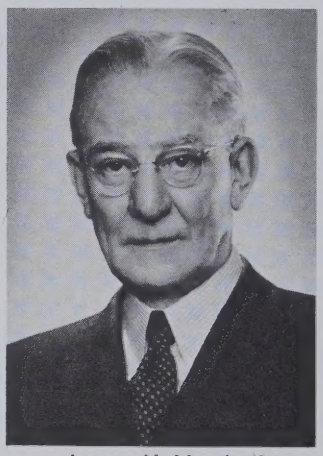
	Length/ft	Uncut Grade	Cut Grade
		oz/ton	oz/ton
First level	109	0.94	0.33
	118	0.27	0.18
	78	1.42	0.77
Second level	475	1.88	0.82
	44	2.99	1.81
Third level	425	2.66	1.64
	260	1.31	0.91
	340	0.52	0.31
	110	0.23	0.17
	55	0.61	0.36

The results definitely established the continuity and exceptionally high grade value of the veins. This "free gold" occasioned "high grading" or theft of some spectacular ore. Stovel was having a haircut in South Porcupine while the local King of the high graders, Charlie Lamothe, was in the next chair and said: "Our mine is doing well for both of us." That was the situation with gold at $35 per oz — what would it have been like if gold had been at 1980 values!

The early Hallnor Directors were all members of the Noranda Board:

J. Y. Murdoch (1890-1962) O.B.E., K.C., LL.D.	— President
F. M. Connell (1884-)	— Toronto
L. H. Timmins (1900-)	— Montreal
A. L. Ellsworth (1883-1950)	— Toronto
Hon. J. E. Perrault (1863-1948) K.C., LL.D.	— Montreal

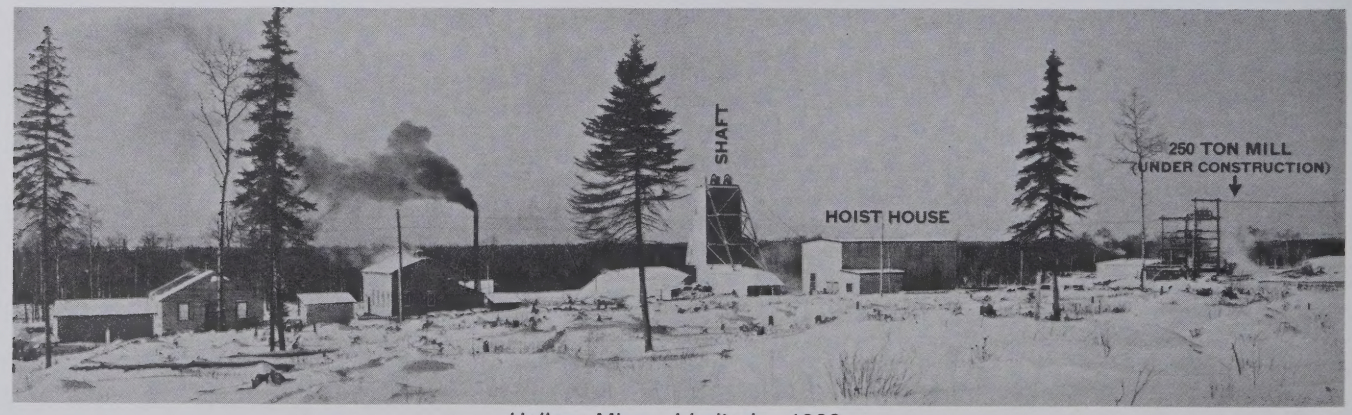
Fred Connell and Leo Timmins were mining engineers from Queen's University and McGill. The latter was a son of Noah H. Timmins, the President of Hollinger Gold Mines. Oliver Hall, after whom the property was named, became a Director in 1948 succeeding the Hon. J. E. Perrault (deceased), and Vice President in 1949.



James Y. Murdoch

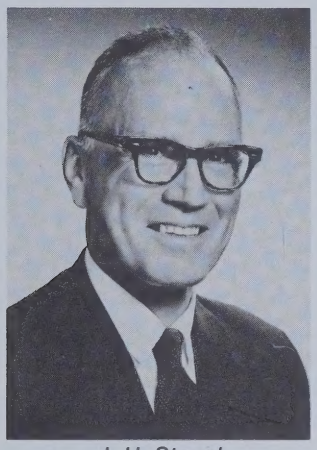
MINING AND MILLING

The end of the depression was not in sight and the northern gold mines were the bright spot in the economy as regards employment. Unemployed miners looking for work averaged 15 to 20 per day and if five or six men were employed one day, the following day might bring as many as 50-60 men looking for work.



Hallnor Mines, Limited — 1938.

Late in 1937, it was decided to build a mill that could treat 250 tons of high grade ore per day or about 400 tons of lower grade ore, plus other necessary facilities such as crushing plant, change house, machine shop, office, bunkhouses and houses for senior staff. Noranda advanced a total of $775,000 cash to bring the mine into production.



J. H. Stovel

Exploration drifts on the 360 and 560 ft levels were driven into the adjacent Bonetal ground, but they found no trace of surface values. The option agreement on these claims could not be extended and it was allowed to lapse.

Hallnor purchased the first air driven mechanical mucking machine used in the Canadian gold mines. Other mining engineers came to see the loader work, including W. S. Row (1904-), Manager at the Kerr Addison mine at Larder Lake, Ont. Before long, hand loading was a thing of the past throughout the industry.

Construction of the mill, which was designed by C. G. McLachlan (1896-) and staff at Noranda, was completed in 1938. The steel head frame was erected over and around the temporary wooden structure used for shaft sinking while underground work continued. The shaft had been deepened to 785 ft and in 1939, was sunk to 1000 ft with stations at 760 and 960 foot horizons. The mill treated an average of 338 tons of 0.59 oz gold per day that year to produce bullion valued at more than $2,600,000 or over $21 per ton, from which it earned $1,000,000. This paid off $375,000 which had been borrowed to bring the property into production.

By 1940, the mine was assured of a life of four years above the 1260 ft level. In January 1941, it was decided to sink the shaft a further 600 ft to try to find a favourable zone under the carbonates which came in from the east. The scarcity of labour reduced the operation to only 250 tons in 1943 and it was not possible to do any development work until 1946. The mill was then treating 300 tons per day averaging 0.47 oz gold. The Broulan Reef Mine, adjoining Hallnor to the west, went into production with a 700 ton mill in 1939. As the war progressed, Canada's gold production, sold for U.S. dollars, became very important to the country's economy.

HALLNOR ENLISTED EMPLOYEES — World War II

Chappell, G. W.
Clark, F. R.
*Cochrane, Cecil G.
Forsythe, Ray
Hall, Bernard
*Ionel, John
Kartio, L. E.
Labow, L. F.
Lawrie, W. G.
Maki, W. A.
McVey, E. B.
Owens, E. B.
Prankie, G. A.
Ramsay, H. W.
Richards, S. R.
Richardson, R. W.
Rudolf, R. G.
Simons, J.
Slavinsky, S. S.
Tomlinson, A. C.
Young, Gordon

*Both killed in action (C. G. Cochrane was lost in the sinking of the Caribou).

By 1943, only 87 men were working underground compared with 121 at the outbreak of war. The issued capital stock was held by 400 shareholders with Noranda owning over 94% of the shares outstanding. At this time, the average grade of ore reserves was 0.37 oz.

POST WAR PERIOD

The Federal Government established The Emergency Gold Mining Assistance Act (EGMA Act) in June 1948 to keep the gold mines operating in spite of greatly increased cost of production, for which there had been no compensating increase in price. In 1947, Hallnor's cost was less than $18 per oz but in 1948, it realized a small after-tax credit due to EGMA. Hallnor's gold was sold in the free market in 1951, so there was no further credit. The increase over and above the Mint price that year was $29,000 in the fourth quarter. However, costs continued to escalate and in 1958, Hallnor elected to sell to the Mint again to qualify under EGMA. The price received was slightly under $34 U.S. due to the premium on Canadian funds. Fortunately for the mines, the Canadian dollar fell from a peak of 105.5¢ in 1960 and was pegged at 92.5¢ U.S. in May 1962.

A. L. Ellsworth who had been President of the British American Oil Co., now Gulf Canada Ltd., died in 1950 and H. L. Roscoe (1885-1962), Vice President of Noranda, succeeded him on the Board. The esteemed Oliver Hall died in 1954 and John Bradfield (1899-), a Vice President of Noranda, succeeded him. The Board was still composed of Directors of Noranda:

J. Y. Murdoch — President
H. L. Roscoe — Vice President
F. M. Connell
L. H. Timmins
J. R. Bradfield.

Stoping operations, originally square set and shrinkage, had gradually been changed to horizontal cut and fill. Waste rock and sand were used initially for fill. Later, the use of deslimed mill tailings was successfully introduced for this purpose. The shaft, which had been deepened to 1650 ft was sunk to 3150 ft after the war and to 3475 ft in 1955. In 1958, an inclined winze was started from the bottom or 22nd level and sunk to a depth of 3793 ft by 1960. Drifting on the 24th level and diamond drill intersections below led to a decision in 1961 to sink a vertical winze 1250 ft below the 21st level.

In 1953, the United Steelworkers of America were certified as Bargaining Agents for the employees and an illegal strike was called about mid-year. The sticking point was the 'check-off' of union dues. The strike closed the mine for seven months but was settled with no 'check-off'. Ten years later, the Lesage Government in Quebec legislated the compulsory 'check-off'. The Province of Saskatchewan followed suit and eventually it was imposed in Ontario. By 1979, twenty American states had by referendum reverted to "right-to-work" legislation and the British people voted to abolish the 'check-off' although at time of writing, this had not been accomplished.

Operations continued through the Fifties and by the end of 1958, the mill had treated more than 2.5 million tons of ore from which had been recovered more than one million ounces of gold and 80,000 ounces of silver with a value of $37,300,000. Dividends, first paid in 1938, totalled nearly $13 million by the end of 1959.

PARTICIPATIONS

Hallnor participated in the Noranda Group in the financing of Geco Mines Limited in 1954 by acquiring some 20,000 shares at $10 per share plus a commitment to take up 5000 additional shares and to provide up to $200,000 to bring the mine into production. The Group's holding in Geco was about 33% and the cost of bringing the mine into production, at 3000 tons per day, was $13.5 million.

Hallnor also acquired 155,000 shares of Anglo-Huronian Limited which, along with Noranda's holding, amounted to 43% of the outstanding stock of that company.

PERSONNEL

The initial Manager, Lester Sharp, who had taken charge of the operation in 1936, decided to retire in 1952, having made a substantial contribution to the mining industry. In 1948, W. G. Brissenden (1915-), who was a classmate of Stovel at McGill, came from the Paymaster Mine as Mine Superintendent. He went to Gaspé Copper Mines Ltd. as Assistant Manager in 1951 and was succeeded by W. J. Marshall (1915-) from Noranda who followed Sharp as Manager in 1952. Marshall left Hallnor in 1961 to become Manager of the larger adjoining Pamour Mine.

Denis Bridger (1922-) from Noranda became Mine Superintendent in 1957, then took the same title at another Noranda subsidiary, Aunor Gold Mines, a few miles to the west. He then returned to Hallnor as Manager when Marshall left in 1961. John Gordon (1929-), also from Noranda, succeeded Bridger in 1959 and became Manager in 1962, when Bridger left to manage Orchan Mines Ltd., a Noranda subsidiary in Quebec. Gordon left the mine in 1965 to manage Aunor, after which he went to Noranda's Central Canada Potash mine in Saskatchewan. Marshall, then the Manager at Pamour, was appointed Manager of both Pamour and Hallnor, a position which he held until 1969 when he became Environmental Control Coordinator for the Noranda Group of Companies in Toronto. Dr. W. S. Paul was the medical officer for both Hallnor and Pamour from 1938-1955. All these men assumed responsibility in the community. Marshall was Vice Chairman of the Porcupine General Hospital and the others were Directors. They were all associated with the Porcupine School Board and the Porcupine Chamber of Commerce, etc.



William J. Marshall

Murdoch retired as President of Hallnor in 1959 and was succeeded by Bradfield, the President of Noranda in 1956. In 1960, R. V. Porritt (1901-), Vice President of Noranda, joined the Hallnor Board and in 1961 W. S. Row, also a Vice President of Noranda, replaced H. L. Roscoe, deceased. Porritt became Vice President of Hallnor and Stovel, General Manager.

James Y. Murdoch died on April 18, 1962, having served Hallnor as President from its inception to July 1959 and thereafter as a Director. He had made a great contribution, not only to Hallnor and to the entire Noranda Group of Companies, but to Canada as well. Appropriately, Stovel succeeded Murdoch on the Hallnor Board.

In 1965, the Directors were:

R. V. Porritt	— President
W. S. Row	— Vice President
J. H. Stovel	
D. E. G. Schmitt (1915-)	— Noranda General Manager of Mines
W. G. Brissenden	— Noranda Assistant General Manager of Mines.

Porritt resigned in 1968 and was succeeded by Schmitt as President and General Manager. In 1969, L. S. Brooks (1916-) from Geco Mines succeeded Marshall as Manager and A. D. Dickson (1904-) of Mining Corporation was appointed Assistant General Manager. In 1970, M. J. Slack (1934-) replaced Dickson as Assistant General Manager and in the final year, J. A. Graham (1911-), who had been Manager at Geco, was appointed General Manager of Geco, Pamour and Hallnor until he retired in 1976.



D. E. G. Schmitt

COUNTDOWN

At the end of 1963, Hallnor's ore reserves were still 200,000 tons averaging 0.34 oz gold, and the mill was treating 364 tons per day. Gordon reported that to date, some 3.1 million tons of ore had been mined and treated, from which some 1,225,600 oz gold had been recovered, together with 94,000 oz silver, a total worth of $44.5 million.

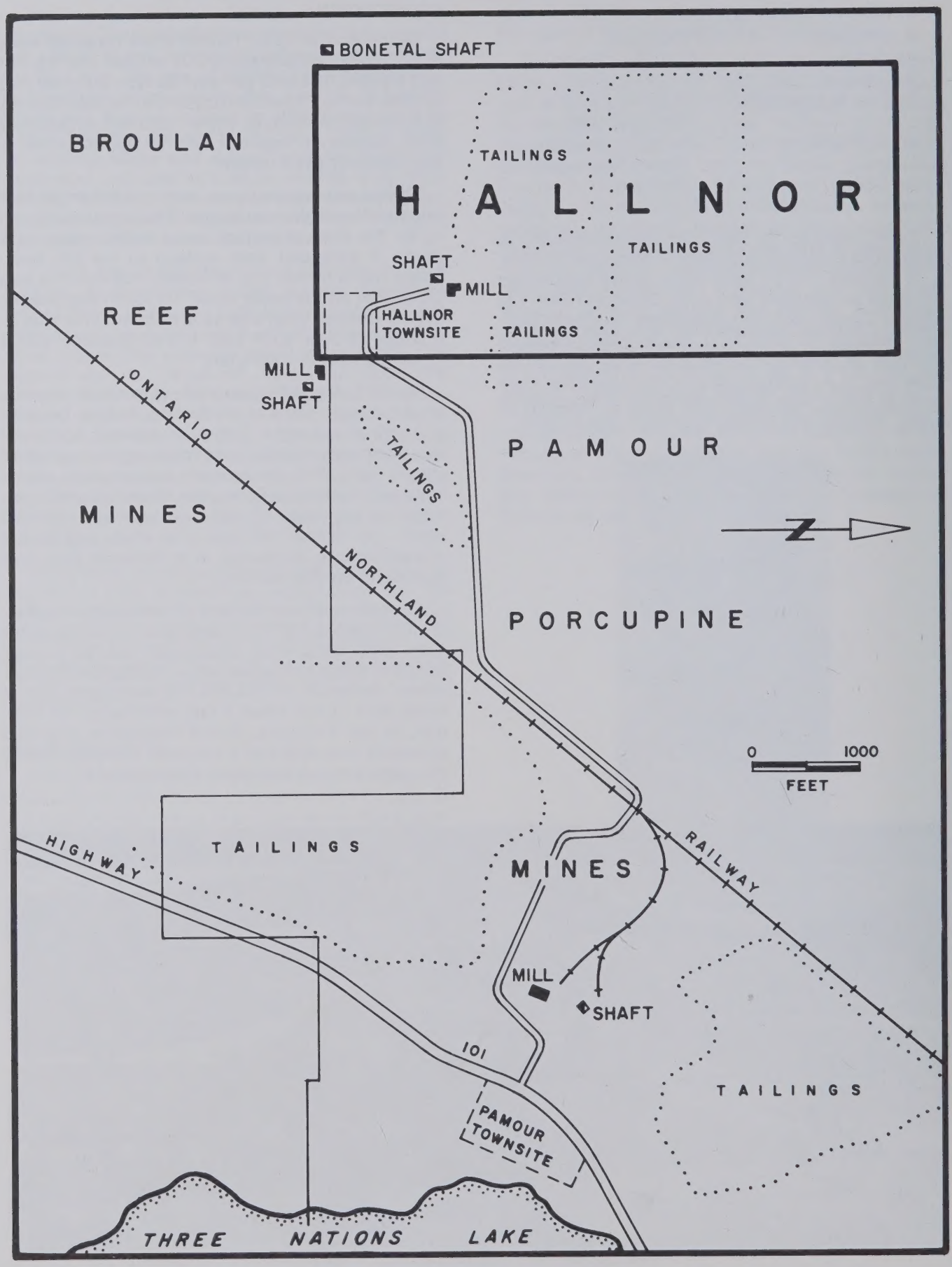
There were two ore zones, both located on the four original Poulet Veteran claims. The upper zone was by far the more important, as to both tonnage and grade. It extended from surface to the 8th level. There was a barren gap of about 1000 ft to the less profitable, erratic lower zone. To reach this deeper ore, an internal shaft was sunk from the 21st level to a depth of over 5000 feet. It was located 1400 ft north-west of the main shaft.

By 1970, due to the low grade of available ore plus the increasing costs of production, Hallnor became a marginal operation. Efforts to develop additional ore were unsuccessful and following an operating loss in April 1971, the property and physical assets were sold to Pamour Porcupine Mines Ltd., with provision to take care of Hallnor employees. After 33 years, the Hallnor mill was shut down and all the remaining ore extracted at a reduced rate and trucked to the Pamour mill.

From the commencement of operations in 1938, the mill treated 4,056,000 tons of ore yielding more than 1,500,000 ounces of gold and 114,000 ounces of silver, with a combined value of $58,000,000 from which dividends of $24,884,000 were paid. For a small mine, it had made a tidy contribution to Canada, to the Province, to the Porcupine and had produced and nurtured a company of select mining men who went on to greater achievements.



Hallnor plant and Employee houses — 1969.


BONETAL SHAFT
BROULAN
REEF
MINES
TAILINGS
H A L L N O R
TAILINGS
SHAFT
MILL
HALLNOR
TOWNSITE
TAILINGS
MILL
SHAFT
ONTARIO
NORTHLAND
TAILINGS
P A M O U R
P O R C U P I N E
0
1000
FEET
HIGHWAY
TAILINGS
MINES
RAILWAY
MILL
SHAFT
101
PAMOUR
TOWNSITE
TAILINGS
THREE
NATIONS
LAKE

PANORAMA
(serving the Noranda Group of Companies)

Silver Anniversary for Golden Hallnor

August 1963 **L. A. Marquis, Editor**

They cut the cake at Hallnor Mines, July 11th, and while veteran Mill employee Alf Kowalsky wielded the ceremonial knife, personable John M. Gordon — at 33, one of the youngest mine managers in the country — shed a note of optimism in his brief remarks to a gathering that included John R. Bradfield, President of Hallnor and the vast Noranda group of Companies, J. H. Stovel, General Manager of Hallnor and the Noranda group of Companies, the Directors of Hallnor, Aunor and Pamour, Mine Managers of these two sister properties and the five Hallnor employees who were present for the initial pouring on July 9th, 1938.

"To date we've had a reasonably good year," Mr. Gordon said. "It has been more encouraging tonnage-wise and on this our Twenty-fifth Anniversary, we all feel a lot better than we did three years ago. We have a relatively young operating staff that is full of enthusiasm and eager to get at the ore of the newly completed No. 3 shaft."

"It is particularly pleasant to welcome Mr. F. M. Connell, who has been a Director of this Company since its inception."

Looking on while Kowalsky did the honours were four other long-time Hallnor stalwarts who along with Manager A. L. Sharp, Mine Superintendent J. H. Stovel and Mill Superintendent S. Richards, were at the scene in the summer of 25 years ago. Ernie White, Roy Duffy, George Yorke and Bob Kennedy attended the event accompanied by Hallnor staff members Walter Sydoryk, Mine Superintendent, W. G. "Bill" Howie, Accountant, Roger Erskine, Mill Superintendent, Mine Captain Hilbert Carson, a twenty-five year veteran himself and Geologist Lomer D'Aigle.

Hallnor, whose Directors were told three years ago that the mine would be forced to close unless favourable areas were located below the 24th level, actually came into life from an Oliver Hall-directed underground study of the Pamour formation. In 1936 an option was taken on the adjoining Poulet-Veteran claim of 160 acres plus 20 acres of Porcupine-Creek ground to the west. The claims were transferred to a new company and the late James Y. Murdoch, of Noranda, became chief officer.

With Noranda providing ample funds to carry it into production, Hall's faith in the newly-acquired ground was quickly justified and a three-compartment shaft reached 591 feet that same year and 785.5 in 1937. Although raises had not been completed in 1937, the results were so encouraging that mill construction was proceeded with and production (250 tons of average grade, or 400 tons of lower grade) was reached during the summer of 1938, barely two years after the acquisition of the Veteran and Creek claims.

J. Y. Murdoch served as President from 1937 to 1958 and he never lost interest in the Company. John R. Bradfield took over the reins from Mr. Murdoch in 1959. The first Mine Manager was the late Mr. A. L. Sharp and he remained until 1951 when W. J. "Bill" Marshall arrived. Marshall, now at Pamour, was succeeded by Denis Bridger. The latter is now General Superintendent directing construction operations at the Noranda-managed Mattagami area mines.

In 25 years (to June 30), Hallnor has produced 1,201,769 ounces of gold from the milling of 3,035,429 tons of ore. However, the ore reserves have continued to keep pace with the ever-incessant depletion known to all mines. At the end of 1962, reserves were estimated at 148,000 tons grading 0.31 ounces of gold. This does not include any ore below the 23rd level. As Gordon explains: "We've been able to find enough new ore to keep our tonnage at a high level until our new development programme begins to show results."

To the 200-plus employees of Hallnor, the cake-cutting is an auspicious occasion to mark long years of service to Hallnor, and as good citizens. Twenty-one served with Canada's Armed Services during the Second World War and one — C. J. Cochrane — paid the supreme sacrifice. An even dozen are Quarter Century Club members, almost all are active in some form of civic endeavour, and Hallnor employees are well known in the sports world.

Today, as the well-directed development program pushes ahead, the mill continues to treat about 370 tons of ore daily.



Helping cut Hallnor's cake is F. M. Connell, who has been a Company Director since its inception. Watching are long-time employees Alfred Kowalsky, George Yorke, John R. Bradfield, Noranda Mines' Chairman and President, Roy Duffy, Ernie White and Robert Kennedy. *(photo by H. R. Pownall)*

HALLNOR MINES PERSONNEL

	Manager	Mine Supt.	Mill Supt.	Mech.-Elect.	Chief Acct'nt
1936	Lester Sharp		Steve Richards	Chas. Cunningham	
1937	"	Joe Stovel	"	"	W. St. Croix
1941	"	"	"	"	"
		(enlisted)			
		N. H. Atkinson			
1942	"	"	"	"	F. C. Evans
			(enlisted)		
			Kirby Coombes		
1948	"	Joe Stovel	"	"	"
		Wm. Brissenden			
1949	"	"	Steve Richards	"	"
1950	"	"	"	"	"
			Dick Coleman		
1951	"	"	Steve Richards	"	"
		Wm. Marshall			
1952	Wm. Marshall	John Hall			
1954	"	D. G. W. Rowe	"	"	"
				S. O. Isaacson	
1956	"	Denis Bridger	Bob Duval	"	Wm. Howie
1958	"	"	"	E. Finan	"
1959	"	"	Don McKay	"	"
		John Gordon			
1961	Denis Bridger	"	Ken Stubbs	"	"
1962	"	P. Hamilton	Roger Erskine	"	"
	John Gordon				
1963	"	Walter Sydoryk	Jim Austin	"	"
1964	"	"	Jim Miller	"	"
1965	Wm. Marshall	B. A. Thomson	Colin Campbell	R. Charron	"
1966	"	D. P. Walli	Dan Dever	"	"
1967	"	B. A. Thomson	"	"	"
		D. P. Walli			G. D. Towers
		W. W. Holmes			
1968	"	B. A. Thomson	"	"	"
		W. W. Holmes	C. W. Eggert		
1969	Lorne Brooks	"	"	Vern Andrew	"
				K. C. Musgrave	
1971	Malcolm Slack	"	"	"	"
1972	Les Redford	—	—	—	—

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